

Flight Summary: WB-57F MidCiX – 17 April 2004

Purpose of Mission: Instrument checkout flight. Objective was to conduct a short mission in nearby cirrus to ascertain the status/viability of the instrument payload.

General Information

Flight date – 17 April 2004

Flight description – Flight #1, MidCiX mission, instrument check-out

Flight Duration – 4.5 hours.

Crew – Scott Reagan and Brian Barnett

Weather Observations

- A thin layer of broken cumulus clouds was always present about 5000'.
- A thin layer of cirrus was found in the Texas panhandle, and southern Oklahoma.

Flight Profile

- We took off and immediately flew through a cumulus cloud. We climbed to FL 480.
- Once the cumulus was beneath us, we descended to FL 380. We cirrus layer top at 16:40, and were in the thickest part of the layer at 16:42. The blue sky and the ground were both visible.
- The layer thickened around 16:47, making the ground not visible. We ran out of the cloud around 17:04, and turned SE to intercept again.
- At 17:13:00, we penetrated a “wall” of much denser cirrus clouds.
- The cirrus layer was anywhere from 500' to 2000' thick, varying.
- We climbed to the top of the layer and skimmed the surface at 17:23. Visually, it didn't look like we were in cloud, but the CAPS display showed otherwise.
- We noticed we were laying down contrail at 17:30:30
- We descended to the bottom of the layer at 17:50. The ground was clearly visible.
- At 18:02, we climbed back up to FL 480, and returned to base, penetrating a cumulous cloud at 5000'.



Top: Cirrus layer above cumulus over Oklahoma. Bottom: Compact Spectrometer and Impactor (CSI) instrument on the WB-57F.

Flight Log

Take off	15 :14	Landing	19 :40
-----------------	--------	----------------	--------

Instrument Failures/Notes/Times

Instruments flown: MMS, CLH, CAPS, Harvard TW, Harvard WV, CAPS, PIP, CSI, JLH, VIPS

Instruments not flown: CIN, CPI, NEV, SPP

Preliminary Instrument Notes:

Appears Good: CLH, Harvard TW and WV, CSI, JLH, MMS

Some Issues: CAPS, PIP

Really Bad: None

- VIPS fail light was on the entire flight (this was expected).
- MMS Box: 17:59:10 – 18:01:50, IAS = 120, FL 390
- MMS Pitch: 18:19:49 – 18:20:46, Mach .675
- MMS Yaw: 18:20:55 – 18:21:40, Mach .65

Nav Data Information

- IP Address: 139.169.70.28
- User Name: anonymous@wb57f.asds.net
- Password: <any email address>

Compiled by Brian Barnett, Jay Mace